QUOTE NO. 210507-01-ES
IMPLEMENT 200 MHZ POLLING LOOP
WITH ANTENNA SYSTEM MOUNTED ON EST
CITY OF DELRAY BEACH
(updated May 14, 2021)
MAY 7, 2021

Hassan Hadjimiry
Utilities Director
City of Delray Beach, Fl
33444

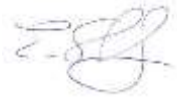
Director Hadjimiry,

DFS would like to thank you for the opportunity to offer our products and services. All products offered are compatible with your DFS SCADA System. This quotation includes, and is limited to, the products and services specified in this proposal. It should be noted with the quick turn required that DFS has made every effort to ensure the accuracy of this proposal. However, estimates and worst-case scenarios were used within this proposal, specifically regarding the EST antenna installation in Phase 1, and Module requirements in Phase 2.

DFS will honor the pricing listed within the proposal. However, we do not believe all the material listed, specifically in the modules under Phase 2, will be required. DFS did not have the opportunity to test Utility equipment and therefore listed all modules for replacement. Any Utility equipment DFS finds suitable for reuse would be deducted from those amounts. Warranty will not apply to reused Utility Modules.

Should you have any questions regarding this proposal, please contact Tom Hogeland or me at 321-259-5009.

Sincerely,



Eric Stord
Sales
Data Flow Systems, Inc.

BACKGROUND:

Based on a request from the Water System Utility at Delray Beach, DFS has performed a survey to understand the general equipment condition and installations. Of primary concern is the issue of reliability of the communications of the equipment. DFS noted two primary conditions that may affect the system's effectiveness, the radio system, and the RTU construction and integration. This proposal provides two phases of corrective activities: the radio system and the hardware and equipment systems. It should be noted; estimates have been used in the proposal, which has affected the pricing.

PHASE 1 RADIO SYSTEM

Regarding the radio system, a new 200mhz frequency system will be implemented. The Utility's current frequency is interfered with, and much of the older radio equipment is out of date. To accomplish the frequency change, DFS will provide new 200mhz radios for the surveyed water system assets. DFS will also add new antennas to the EST to provide better coverage to the Utility's remote sites.

As we do not know the details of the RTU co-integration via server ladders, the migration path will be to put the new radio network on the existing driver. What this means is under this proposal, no station configurations on the radio driver will be necessary. No migration of current radio to network communications is included within this proposal. The Utility is responsible for providing for all network communications paths and devices. The separate Water System frequency will prevent the Lift Station frequency from being a direct interferer. A further migration path for the Lift Station is considered under the plan, to be addressed in a separate proposal.

BILL OF MATERIAL & SERVICES PHASE 1:

1-1. (1) New 200mHz Polling Loop on EST .....$ 52,007.00

FTU For EST

Includes:

- (1) FTU204 enclosure cut for multiple Radios
- (4) Telemetry Interface Module/radio (217 MHz, 2W)
- (2) CTA206 Dipole Antenna (mounted on EST)
- (2) RTA209 Yagi Antenna
- (1) Coaxial Cable w/Connectors
- (1) Polyphaser Coax Surge Protector Kit
- (1) FCC Licensing Services
- (1) Onsite Installation Services (per DFS Scope of Work)

1-2. (1) New CTU for 200mHz and existing 458mhz Polling Loops .....$ 9,216.00

CTU

Includes:

- (1) CTU204 enclosure cut for multiple Radios
- (2) Telemetry Interface Module/radio (217 MHz, 2W)
- (1) RTA209 Yagi Antenna, existing tower.
- (1) Coaxial Cable w/Connectors
- (1) Polyphaser Coax Surge Protector Kit
- (1) FCC Licensing Services
- (1) Onsite Installation Services (per DFS Scope of Work)

1-3. (1) RTU Modification Kit for 217 MHz Polling Loop YAGI (HARDWARE ONLY) ..... $3,222.00 EACH

KIT IS HARDWARE ONLY PER SITE. SERVICES & FCC PRICED SEPARATELY BELOW IN ITEMS 3 & 4

Kit includes:

- (1) Telemetry Interface Module/radio (217 MHz, 2W)
- (1) Polyphaser Surge protector
- (1) RTA209 Yagi Antenna
- (1) 23' Coaxial Cable w/Connectors (Pre-assembled)
- (8) Band-it, SS Cable Ties (PPA571 coated)
- (2) 1" Glue-Type Heat Shrink @ 4" Length

(1) FCC Licensing Services
(1) Onsite Installation Services (per DFS Scope of Work)

1-4. (1) RTU Modification Kit for 217 MHz Polling Loop RUBBER DUCK (HARDWARE ONLY)..... $2,793.00 EACH

KIT IS HARDWARE ONLY PER SITE. SERVICES & FCC PRICED SEPARATELY BELOW IN ITEMS 3 & 4
Kit includes:

(1) Telemetry Interface Module/radio (217 MHz, 2W)
(1) Polyphaser Surge protector
(1) Rubber Duck Antenna
(1) LMR to BNC Connector and Pigtail.
(2) Glue-Type Heat Shrink @ 4" Length
(1) FCC Licensing Services
(1) Onsite Installation Services (per DFS Scope of Work)

THE FOLLOWING HARDWARE QUANTITY DISCOUNT APPLIED TO RTU MODIFICATION KIT 2&3:
***Apply a 5% discount for 10-24 kits purchased under a single PO**
***Apply a 10% discount for 25-99 kits purchased under a single PO**
***Apply a 15% discount for 100-199 kits purchased under a single PO**

1-5. (1) DFS Installation of RTU Modification per Man-week (SERVICES ONLY)..... $ 8,950.00/Week

THIS ITEM IS FOR INSTALL SERVICES ONLY. HARDWARE IS PRICED SEPARATELY ABOVE IN ITEMS 1 & 2
Under this item, DFS will install the RTU Modification Kit to an estimated fourteen (14) sites during a Monday through Friday workweek. DFS must be permitted to work onsite up to 10 hours per day (daylight hours). Pricing for this item also includes the rental of a man-lift for antenna replacement. All replaced equipment will be surrendered to the City.

PHASE 1 SUMMARY OF COSTS:

The costs for Phase 1 consist of the FTU, EST Antenna installation, and CTU rework, which are Items 1-1 and 1-2, subtotal for the Central/EST, or data collection system. Added to this will be the subtotal of the RTU sites or data transmission systems. Each conversion kit used at the RTUs, Items 1-3 and 1-4, will be divided by the number of installations performed in a man-week. These three items, Yagi kit total, Rubber Duck kit total, and the number of weeks to install constitutes the RTU subtotal. The two subtotals combined are the total cost of Phase 1.

Items			
1-1		**$52,007.00**	
1-2		**$9,216.00**	
	Subtotal Central and EST	**$61,223.00**	
1-3	**$3,222 X 21 = $67662 X .90 =**	**$60,896.00**	**(10% discount applied)**
1-4	**$2,793 X 49 = $136,857 X .90 =**	**$123,171.00**	**(10% discount applied)**
1-5	**70 Site / 14 per week = 5**		
	5 Weeks X $8950.00 =	**$44,750.00**	
	Subtotal RTU sites	**$228,817.00**	
Total for Phase 1		**$290,040.00**	

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PHASE 2 RTU HARDWARE AND MODULE REPLACEMENT.

Phase 2 is the more complicated Phase within this proposal. The inspection of the RTUs revealed; aged module and backplane hardware and the outdated RTU construction and wire integration techniques. We inspected many sites and can report some of your sites are in good condition, while others may need attention. Much of your aged hardware can be updated, and some cannot. Age is not necessarily a reason to replace DFS products; updating modules, firmware, and components when needed is strongly suggested, as It helps maintain the hardware in proper working order.

Regarding your RTU construction, some locations appear suitable; however, most of your RTU uses construction techniques that are antiquated and well over 20 years old. We no longer use the aged technology as improved products and methods have been adopted and deployed by DFS. The improvements in this regard are all related to reducing maintenance requirements and improving performance, so the changes are significant regarding reliability.

Thorough testing of the system has not been performed regarding the backplane or module I/O communications level. Until such testing can be achieved, all backplanes and modules, other than current DFS modular backplanes MBP001 or MBP202, are suspect and quoted for replacement. All outdoor installations currently mounted inside starter panels will be provided with enclosures to provide a better environment for the telemetry equipment. New wiring or terminal strips to interconnect the existing wiring with the new RTU will be provided.

In some locations, custom fabricated inner panels will need to be assembled to fit inside existing MCC/Starter type enclosures. These inner panel assemblies will contain modular backplanes, din rail, power supplies, and other needed integration equipment prescribed by DFS best integration practices.

It should be noted; the total Phase 2 cost provided within this proposal is expected to be less than listed. A separate proposal will need to be generated after Phase 1 is complete, as additional information on the system can be gathered after communications are corrected. The Water System has been divided into the following areas: WTP, Wells, and Pump Stations.

BILL OF MATERIAL & SERVICES PHASE 2:

2-1 WTP (including EST)

RTU Enclosure with Backplanes.

	RTU202	RTU204	RTU210	SE204	SE210	SE216
Number	27	4	1	1	4	1
Cost	$1,199.00	$3,143.00	$5,156.00	$7,143.00	$10,156.00	$13,156.00
Installation	1	1	3	3	4	4
Subtotals	$89,613.00	$21,052.00	$11,516.00	$13,503.00	$74,544.00	$21,636.00
WTP EST Area Total		$231,864.00				

Modules that may be required based on current assets.

	DMM	DCM-4	DCM-8	AMM	ACM	PSM
Number	20	22	9	36	21	20
Costs	$912.00	$966.00	$1,156.00	$1,329.00	$1,273.00	$549.00
Discount	20%	20%	20%	20%	20%	20%
Subtotals	$14,592.00	$17,001.60	$8,323.20	$38,275.20	$21,386.40	$8,784.00
WTP EST Area Total		$108,362.00				

2-2 Well System

RTU Enclosure with Backplanes.

	RTU202	RTU204	RTU210	SE204	SE210	SE216
Number	29	2				
Cost	$1,199.00	$3,143.00				
Installation	1	1				
Subtotals	$96,251.00	$10,526.00				
Well Area Total		$106,777.00				

Modules that may be required based on current assets.

	DMM	DCM-4	DCM-8	AMM	ACM	PSM
	4	31	0	32	0	10
Costs	$912.00	$966.00	$1,156.00	$1,329.00	$1,273.00	$549.00
Discount	20%	20%	20%	20%	20%	20%
Subtotals	$2,918.40	$23,956.80	$0.00	$34,022.40	$0.00	$4,392.00
Well Area Total		$65,290.00				

2-3 Water Pump Station System

RTU Enclosure with Backplanes.

	RTU202	RTU204	RTU210	SE204	SE 210	SE216
Number	6		1		1	1
Cost	$1,199.00	$3,143.00	$5,156.00	$7,143.00	$15,156.00	$21,156.00
Installation	1	1	3	3	4	4
Subtotals	$19,914.00	$0.00	$11,516.00	$0.00	$23,636.00	$29,636.00
Pump Station Total		$84,702.00				

Modules that may be required based on current assets.

	DMM	DCM-4	DCM-8	AMM	ACM	PSM
	13	7	3	13	3	1

Costs	$912.00	$966.00	$1,156.00	$1,329.00	$1,273.00	$549.00
Discount	20%	20%	20%	20%	20%	20%
Subtotals	$9,484.80	$5,409.60	$2,774.40	$13,821.60	$3,055.20	$439.20
Pump Station Total		$34,984.00				

When viewing the above table, two points should be noted:

1. The "Enclosure with Backplane" represents a replacement of Subtotals the existing module rack to the updated design, with enclosures as needed.

2. The "modules that may be required" represent a module count of what is currently in operation in a Utility area, specified, WTP, Wells, and Pump Station. If all modules were replaced, this would be the cost the Utility. The PSM Module cost is an exception in the counting process, as these costs represent PSM that MUST be replaced if the Enclosure and Backplane for a site are done.

The Above Tables represent a near-complete replacement of the Water System SCADA system. As many of the modules are expected to be reused, the total costs of modules should not be expected. Phase 2 does not represent the costs for the Radio System installed in Phase 1, and Phase 1 must be done first.

Phase 2 Costs

Hardware and Backplane is: $423,343.00 (See Note 1 above)

Replace All Modules in service: $208,636.00 (See Note 2 above)

Total for Phase 2 $631,979.00

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WORK TO BE PERFORMED BY THE UTILITY / OTHERS:

1. Make site available when work is scheduled, and have personnel available to operate system as needed when DFS work is scheduled.
2. Any required underground locate information must be provided before DFS installation services can be scheduled. DFS will provide an underground locate information form. The Utility will be the underground locate Point of Contact. The Utility must provide a contact name and phone number for use by locate services should they need to gain access to a secured area or are unable to find the site based on locate info provided by Utility.
3. Any purchase that doesn't include the offered installation charge will be shipped to the City for installation by others. In this case, shipping charges will be added at time of invoice.

PRICING & TERMS:

Pricing is based on NET 30 payment terms. Partial billing may occur as individual services are completed. Lead time is 8-10 weeks, except of sites classified with "SE" which may be 20 weeks, after receipt of order. Any applicable shipping charges will be added at time of invoice. Please review the Quotation Notes listed below. This quotation will be honored for 90 days. Should you have any questions or require additional information

about this quotation, please contact Fred Toone at 321-259-5009 x1182.

QUOTATION NOTES:

1. Only those items and services specifically listed above are included in this quotation.
2. Any purchase that doesn't include the offered installation charge will be shipped to the City for installation by others. In this case, shipping charges will be added at time of invoice.
3. It must be noted that DFS will file FCC license application(s) for each radio site upon receipt of order. There are fees associated with the FCC application(s). If this order is cancelled, the FCC license fees will remain payable to DFS.
4. DFS employees will not enter "Confined Spaces" and/or "Permit-Required Confined Spaces" as defined by OSHA. Any such requirement will be performed by others.
5. All electrical equipment to be accessed by DFS employees must be temporarily removed from service during the performance of our scope of work.
6. This quotation does not include any required permitting, sealed drawings, or associated fees.
7. DFS' Standard Warranty applies to this project. www.dataflowsys.com/products/warranty-statement.php
8. This quotation stipulates that DFS existing insurance provider(s) and policy coverage are acceptable. Policy information can be found at http://www.dataflowsys.com/company/documents/insurance-coverage.pdf
9. This quotation is formatted and priced for a direct purchase from the Utility. If this scope is to be purchased by others, a revised quote is required to cover additional project administration charges. These additional charges cover routine contractor/developer requirements such as contract management, submittal preparation, project coordination, owner notices, etc.